

REMARKS

This Amendment is filed in response to the Office Action dated September 25, 2007, which has a shortened statutory period set to expire December 25, 2007.

Claims 1-17, 19-21, 23, 51-56, 60-76, And 78 Are Patentable Over Husted

Claim 1, as amended, recites in part:

setting an enable restart circuit that responds to a positive in-band power change of the in-band signal and an enable power drop circuit that responds to a negative in-band power change of the in-band signal,

wherein the enable restart circuit and the enable power drop circuit are configured to abort the in-band signal based on inputs to the enable restart circuit and the enable power drop circuit.

Applicant respectfully submits that Husted fails to teach this limitation.

Husted teaches an automatic gain control system that can quickly differentiate between desired in-band signals from high power out-of-band signals that overlap into the target band.

Paragraph 0006. In this system, weak signal detection is used for arriving signals not large enough relative to blockers or noise to cause gain change, whereas strong signal detection is used for larger arriving signals that cause gain drop.

Paragraph 0031. Husted can use filtering, windowing, and selective sampling to determine whether an out-of-band (e.g. an adjacent interferer) signal could be overlapping into the target band. Paragraphs 0051, 0052, and 0054. Additionally, Husted can use a two-threshold windowing process during weak signal detection to determine that an in-band signal is a desired signal. Paragraph 0065. However, notably, Husted does not

teach setting an enable restart circuit that responds to a positive in-band power change of the in-band signal and an enable power drop circuit that responds to a negative in-band power change of the in-band signal, wherein the enable restart circuit and the enable power drop circuit are configured to abort the in-band signal based on inputs to the enable restart circuit and the enable power drop circuit.

Because Husted does not disclose this recited step of setting, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 1.

Claims 2-17 depend from Claim 1 and therefore are patentable for at least the reasons presented for Claim 1. Based on those reasons, Applicant requests reconsideration and withdrawal of the rejection of Claims 2-17.

Claim 19 recites in part, "aborting the signal reception sequence if a new signal is detected, wherein the new signal is stronger than the detected in-band signal by at least a threshold amount". The Final Office Action cites paragraphs 0031 and 0066 as teaching these limitations. Applicant respectfully traverses these characterizations.

Paragraph 0031 teaches that weak signal detection and strong signal detection (used to identify an in-band signal) are independent and complementary features. Weak signal detection is used for arriving signals not large enough relative to blockers or noise to cause gain changes, whereas strong signal detection is used for larger arriving signals.

Paragraph 0066 teaches that to enable weak signal detection, a potential detected packet must increase the in-band signal power by at least a certain amount and that the increase be at least proportional to any increase in the total signal power (the signal power being of at least a certain minimum size). This enablement embodiment provides extra sensitivity

when a new in-band signal comes in below an interferer or near the noise floor (which would not trigger strong signal detection, but should be considered for weak signal detection).

Because Husted does not disclose this recited step of aborting, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 19.

Claim 20 recites in part, "aborting the signal reception sequence if a decrease in an in-band power measurement of the in-band signal exceeds a delta power decrease limit". The Final Office Action cites paragraph 0054 as teaching these limitations. Applicant respectfully traverses these characterizations.

Paragraph 0054 teaches that windowing (i.e. using a value that is half the previous value added to half the subsequent value at the symbol boundary) filtering can reduce the step in the in-band power. Moreover, temporary spikes in the in-band range can also be nulled out by using the lowest 28 of the 32 samples and thresholds can be adjusted accordingly to compensate for the reduced power measurement due to the missing four samples. Because Husted does not disclose this recited step of aborting, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 20.

Claim 21, as amended, recites in part, "suppressing a channel busy signal if the in-band signal is determined to include at least one undesirable characterisitc". The Final Office Action cites paragraphs 0031 and 0066 as teaching these limitations. Applicant respectfully traverses these characterizations.

Paragraph 0031 teaches that weak signal detection and strong signal detection (used to identify an in-band signal) are independent and complementary features. Weak signal detection is used for arriving signals not large enough relative to

blockers or noise to cause gain changes, whereas strong signal detection is used for larger arriving signals.

Paragraph 0066 teaches that to enable weak signal detection, a potential detected packet must increase the in-band signal power by at least a certain amount and that the increase be at least proportional to any increase in the total signal power (the signal power being of at least a certain minimum size). This enablement embodiment provides extra sensitivity when a new in-band signal comes in below an interferer or near the noise floor (which would not trigger strong signal detection, but should be considered for weak signal detection).

Because Husted does not disclose this recited step of suppressing, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 21.

Claim 23 recites in part, "wherein aborting is only applied to the inband signal having packets of a designated type". The Final Office Action cites paragraphs 0031 and 0066 as teaching these limitations. Applicant respectfully traverses these characterizations.

Paragraph 0031 teaches that weak signal detection and strong signal detection (used to identify an in-band signal) are independent and complementary features. Weak signal detection is used for arriving signals not large enough relative to blockers or noise to cause gain changes, whereas strong signal detection is used for larger arriving signals.

Paragraph 0066 teaches that to enable weak signal detection, a potential detected packet must increase the in-band signal power by at least a certain amount and that the increase be at least proportional to any increase in the total signal power (the signal power being of at least a certain minimum size). This enablement embodiment provides extra sensitivity when a new in-band signal comes in below an interferer or near

the noise floor (which would not trigger strong signal detection, but should be considered for weak signal detection).

Because Husted does not disclose that the step of aborting is only applied to the inband signal having packets of a designated type, Applicant respectfully requests reconsideration and withdrawal of the rejection of Claim 23.

Claim 51, as amended, recites in part:

wherein the control logic includes an enable restart circuit that responds to a positive in-band power change of the filtered digital signal and an enable power drop circuit that responds to a negative in-band power change of the filtered digital signal,
wherein the enable restart circuit and the enable power drop circuit are configured to abort the filtered digital signal based on inputs to the enable restart circuit and the enable power drop circuit.

Therefore, Claim 51 is patentable for substantially the same reasons presented for Claim 1. Based on those reasons, Applicant requests reconsideration and withdrawal of the rejection of Claim 51.

Claims **52-56, 60, 62 and 63** (Claims 55, 62, and 63 amended for clarification) depend from Claim 51 and therefore are patentable for at least the reasons presented for Claim 51. Based on those reasons, Applicant requests reconsideration and withdrawal of the rejection of Claims 52-56, 60, 62, and 63.

Claim 64, as amended, recites in part:

means for selectively responding to positive and negative in-band power changes of the in-band signal, wherein the means for selectively responding is configured to abort the in-band signal based on configurable inputs.

Therefore, Claim 64 is patentable for substantially the same reasons presented for Claim 1. Based on those reasons, Applicant requests reconsideration and withdrawal of the rejection of Claim 64.

Claims 65-76 and 78 (Claims 73-76 amended for limitation conformity) depend from Claim 64 and therefore are patentable for at least the reasons presented for Claim 64. Based on those reasons, Applicant requests reconsideration and withdrawal of the rejection of Claims 65-76 and 78.

Claims 22, 24, 77, And 79 Are Patentable Over Husted And Haverinen

Claims 22 and 24 (Claim 24 amended for limitation conformity) depend from Claim 21, and Claims 77 and 79 (Claim 79 amended for limitation conformity) depend from Claim 64. Therefore, Claims 22, 24, 77, and 79 are patentable for at least the reasons presented for Claims 21 and 64. Haverinen fails to remedy the deficiency of Husted with respect to Claims 21 and 64. Specifically, Haverinen fails to teach details of channel busy suppression or the means for selectively responding. Because neither Husted nor Haverinen disclose or suggest these limitations, Applicant requests reconsideration and withdrawal of the rejection of Claims 22, 24, 77, and 79.

CONCLUSION

Claims 1-17, 19-24, 51-56, 60, and 62-79 are pending in the present application. Allowance of these claims is respectfully requested.

If there are any questions, please telephone the undersigned at 408-451-5907 to expedite prosecution of this case.

Respectfully submitted,

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